

Vol. I

MAY, 1920

No. 5

Some of the important citrus troubles are shown on the Grapefruit leaf used as our trade mark.  
At left is the adult White Fly, next the Rust Mite, near the tip the Purple Scale, and in upper  
middle the disease known as Scab of Grapefruit. All but Scab are shown more or less enlarged.



NOW!  
SPRAY WITH FICO--60  
For White Fly and Scale--Mixes With the Sulphur Sprays

FICO--60  
Saves You Money and Spray Troubles

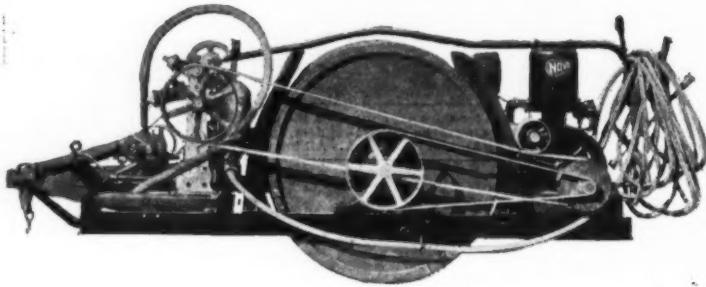
55 cents per gallon in barrels--Shipped from Apopka or Haines City

Return all empty Oil-Spray Barrels to us at Haines City; all Sulphur-Spray  
Barrels to Apopka. We pay freight and allow \$1.25 credit.

Florida Insecticide Company

Apopka and Haines City, Florida.

Best Results In  
Spraying—  
**THE VAN FLEET ROLLER SPRAYER**



Light Traction  
Dependability  
Ease and Economy in Operation  
Availability in Difficult Situations  
Maximum Capacity with Lightest Draft  
From One Hundred to One Thousand Gallons  
No Damage to Roots of Trees by USELESS WHEELS

Send for illustrated circular and prices.

**The VAN FLEET COMPANY,**

R. A. ELLIS, Manager,

Florence Villa, Florida.

## A Sprayer Concern Active in Citrus Development

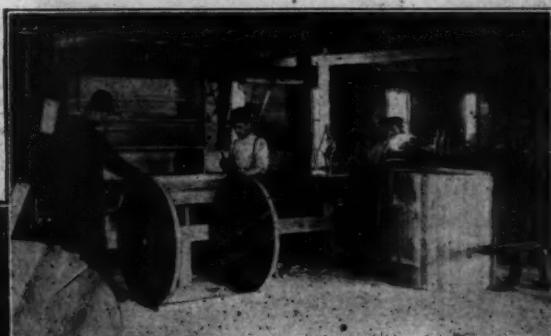
All over the southern citrus belt Fleet early recognized the need of some small, compact, light draft sprayer which could be used in the light sands of the "Ridge" country where the heavy wheel sprayers were in many groves largely impracticable.

Combining his own ideas with the practical views of experienced grove owners, he constructed his first machine. Somewhat crude in construction, rather unwieldy in appearance, a practical demonstration in actual grove work demonstrated its merits. Growers were quick to recognize the efficiency of this new departure in spraying methods and Mr. Van Fleet

gradually contracting his activities in other lines.

But even devoting his entire time to the manufacture of his sprayer, he found that he could not keep pace with the demand. Gradually he worked his output up to three or four per month, but this was the limit of his capacity single-handed. The demand was for more rapid production.

Realizing the merits of the machine and recognizing the growing demand for increased production, a company of local capitalists banded



BUILDING AND ASSEMBLING TANKS

Among these important industries none play a more important part than the Van Fleet company at Florence Villa, manufacturers of the Van Fleet sprayer, the pioneer in the realm of roller type sprayers.

The history of this sprayer and the great business which has grown up from a small beginning some seven years ago is as interesting as the industry itself is important to grove development.

The Van Fleet sprayer was first conceived by "Dick" Van Fleet, a mechanic of Winter Haven, and the first machines were constructed by him in a little blacksmith shop but ill-equipped for the development of the big idea he had in mind. But "Dick" is a thorough mechanic, and withal somewhat of a genius besides, and what he lacked in equipment he more than made good in native genius and determination.

Living in the heart of the great "Ridge" citrus section, Mr. Van

was called upon for more machines.

Still working by himself, but constantly taking in new ideas and conforming his work to the requirements of growers as they became manifest, he made frequent improvements and constantly increased his output, the business growing to such an extent that he was compelled to devote the greater part of his time to the mak-

ing of these machines.

The company is composed of R. R. Van Fleet, president; C. C. Commander, vice-president; F. J. DeHaven, secretary and treasurer; R. A. Ellis, manager; G. Duncan Bruce, a prominent grove owner, and John M. Sniely, also a large grove owner and the manager of extensive estates.

Mr. R. A. Ellis, who had been connected with the Exchange Supply company for a number of years, was made active manager, and with the hearty co-operation of his associates has succeeded in developing the business to a wonderful degree. The output at the present time is over 25 machines per month, or an average of one per day. Yet even with this great increase in output has failed to keep pace with the demand. Difficulty in securing material has operated to retard production. Whereas the company has sought to purchase in car lots and big quantities, it has been necessary to secure supplies in



"Dick" Van Fleet at Welding Bench

## THE CITRUS INDUSTRY

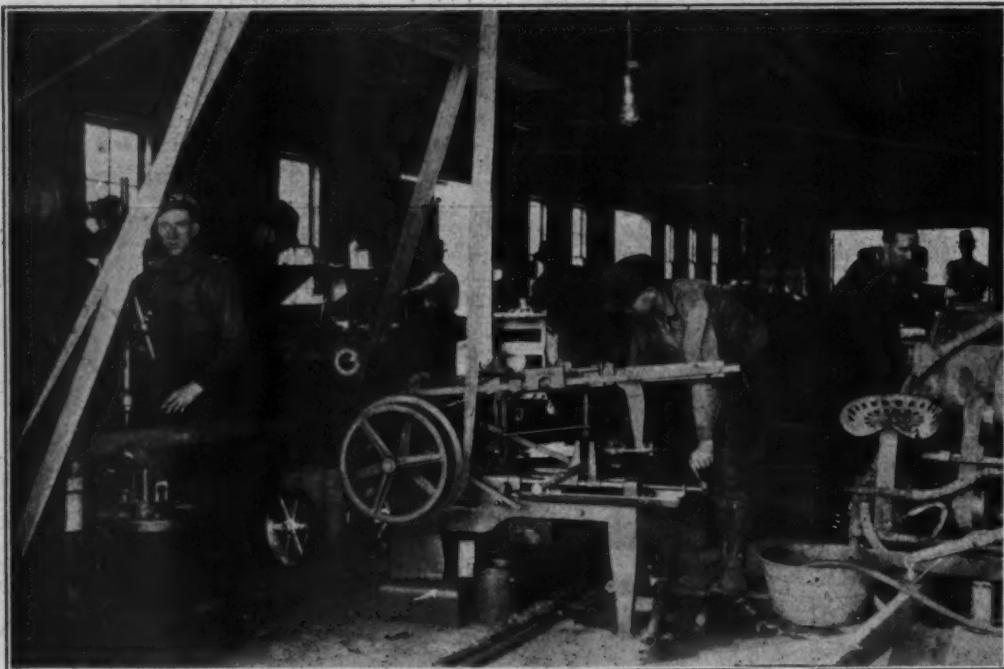
small lots by express or truck, wherever even a small supply could be located. In spite of this handicap the plant has been in constant operation and as soon as normal conditions are again prevailing in the material markets the plant will be still further enlarged and production again increased.

Up to the present time the Florida demand has absorbed all of the output of the factory, with the exception

by one heavy horse or mule. In quality, the spray pump is controlled automatically, doing away entirely with the valve control. The tank is a self-filler and a 200-gallon

This sprayer takes up but little space, is of light draft and easily operated. It is noted for its simplicity and absence of complicated parts and is radically different in construction and operation from the old type of wheel sprayer. It is equipped with Novo engine and

The straining device is outside the tank, easily accessible and may be cleaned without resort to the use of tools. Entire absence of wheels, and the



A BUSY CORNER IN THE MACHINERY DEPARTMENT

tion of one outfit shipped to Porto Rico and another to Alabama. As soon as practicable it is the intention of Manager Ellis to develop the trade of the apple and peach orchards of the north and east and thus to have at all times a diversified demand for the output of the plant. For the present, however, the Florida demand is greater than the possible output of the plant.

The Van Fleet Roller Type Sprayer is made in various sizes, from the very small one-horse machine for use in closely planted nursery rows, to the 600-gallon machine designed for tractor use. A number of these larger machines are now being constructed for the E. I. Dupont de Nemours company for use in its extensive camphor orchards.

The popular machine with the average grower, however, is the 200-gallon machine, designed primarily for operation by two horses, though frequently this machine is operated

Myers pump and only the best of material is used in its construction. The machine and contents is placed on cypress tank is practically indestructible, while the steel entering into its sides the lighter draft and affords composition is of the very finest perfect freedom from injury to tree



Corner in Store Room, showing Small Part of the Engines Carried in Stock

roots which might accrue from the state, where its merits have become cutting of heavily-laden wheel machines. The old idea that it is easier to roll a barrel on its own surface than to push it on soft ground on a

The company takes an active interest in the development of the industry along every line, the latest evidence of this being shown at the recent meeting of the State Horticultural



A SPRAYER IN PRACTICAL OPERATION

wheelbarrow has been made use of growers who understand the need of and worked out to perfection in the Florida groves and who are doing manufacture of this machine.

In actual grove work the Van Fleet sprayer has demonstrated its efficiency and it is now in use in many of the finest groves in the needs of Florida citrus growers.

rural society at Ocala, when Manager Ellis, on behalf of the company, became a life patron of the society in common with 20 other active citrus concerns of the state. A visit to the plant of this new but active manufacturing concern cannot fail to be of interest to all citrus growers.

#### HIGH PRICE RECORD FOR ORANGES ESTABLISHED

Telegraphic advices to the Buckeye Nurseries, Tampa, record the sale in the Boston auction fruit market of a box of the now famous Temple oranges at what is perhaps the world's record breaking price of \$27 for the box.

The Temple orange is a new Florida product, having originated in the grove of L. A. Hakes at Winter Park, and its commercial development having been undertaken by M. E. and D. C. Gillett. It has obtained great attention among citrus growers because of its remarkably deep color, fine flavor and texture, combined with what is practically a kid-glove skin. Young trees budded from the parent Temple stock are said to run true to form and the fruit shows all and with all the symmetry and smoothness of the round orange. As yet but few trees are coming into bearing, so new is the variety. The plantings have been made within the

last 12 months by progressive growers who shared the opinions of the developers of the Temple that it means a new and most distinctive citrus product for Florida.

It is named in honor of the late William Chase Temple of Winter Park, who contributed strongly to modern citrus development in the state. When attention was first called to this new variety, it was predicted this would be a "ten dollar per box orange." The sale in question in the Boston market evidently shows the correctness of the claims insofar as the ability of the fruit to top the market among exclusive purchasers of the highest grade fruits.

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shipment in question was of a single box sent to Boston by express in the usual way through the auction there.

#### LAND PURCHASED FOR SAN ANTONIO FACTORY

A three acre tract of land adjoining the Atlantic Coast Line railway north of the San Antonio station and on the north side of the track has been purchased by the Michigan parties who propose to establish a citrus by-product and sugar plant in San Antonio.

The purchase was made through J. A. Barthle, the San Antonio merchant.

One of these parties, a Mr. Sandt, of Coldwater, is expected to arrive with a car of machinery about July 1st, and the building will start soon after.

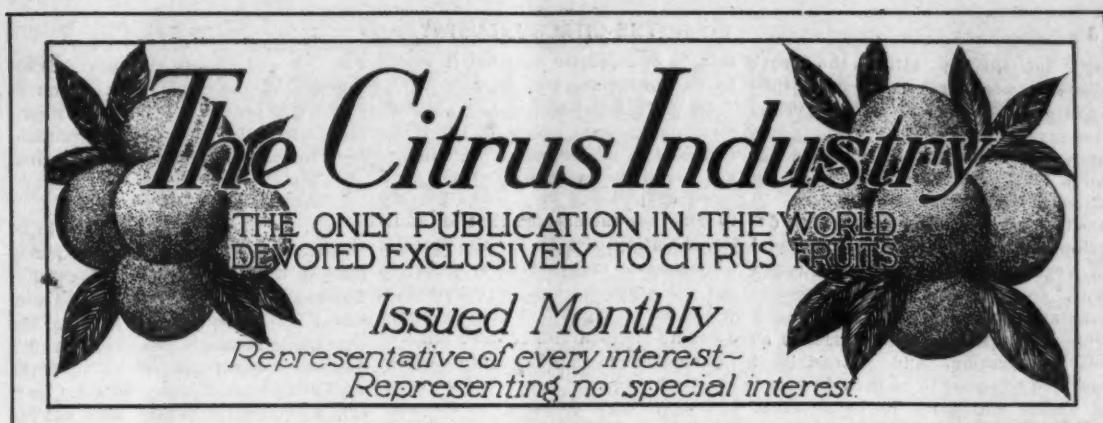
The company proposes to furnish electric current to San Antonio and surrounding country in addition to manufacturing.

# Every Grower of Grapefruit

Will do well to bear in mind the only organized effort to provide for Florida's constantly increasing grapefruit production—through both national advertising and extensive demonstration work in northern centers to increase grapefruit consumption—is sponsored by those growers who are members of the

**FLORIDA**  
**CITRUS EXCHANGE**





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## Efficient Planting Plans Reduce Citrus Costs

By D. W. Hadsell, Pomologist, formerly U. S. Dept. Agriculture

Sixty years ago newcomers found induced the growers to move further peninsula Florida a vast unsettled south in search of protection against domain, covered with tall virgin pine forest, traversed here and there by the few trails over which ox teams dragged the "prairie schooner" of the pioneer traders on their journeys to the handful of small towns scattered along rivers and coast. Land was then free and unbounded, utilized for the most part as a hunting ground where game was very abundant, and as a range for the stock of the cattlemen.

Commercial orange growing at that time was in its infancy and was restricted to the St. Johns river, along which the fruit was shipped by boat to market. The lack of transportation facilities precluded the possibility of marketing fruit grown distant from the natural water-highways and hence the millions of acres which today constitute our choicest grove land were not utilized for citrus growing until the advent of the railroad.

About fifty years later, when the writer first came to the state, every county in South Florida had thousands of groves producing successful commercial crops whose plantings had been stimulated by the high profits realized by old-time growers, and made attractive as a commercial venture over a wide area, by the construction throughout the state of numerous railway trunk lines and branches. The big freeze of '95, which killed the groves planted in the northern sections of the state,

induced the growers to move further desirable location; would buy 50 fine nursery trees; clear one to two acres later freezes. Even this considerable migration failed to more than barely tap the available land. The census figures of ten years ago report but 15 per cent of the state as improved land, and but 5 per cent as under intensive cultivation. Today the figures will show a very different story. Citrus growing has been rapidly developed into an intensive type of farming and the profits realized have been the real cause of the rise in the value of good citrus land.

Seven years ago one acre of choice citrus land would buy 25 to 50 boxes of oranges. Today an acre of the same land is worth, expressed in terms of oranges, from 50 to 100 boxes.

Though more or less subject to the exigencies of nature, as are all crops, the citrus crop has been proven during the past 60 years to be a profitable one and consequently grove efficiency in order to maintain groves and grove land have a higher intrinsic value than ever before. This cost of building a grove and returns of course adds to the cost of establishing a grove. Fifty dollars seven years ago would buy one or two acres of choice citrus land; it would have bought 100 fine nursery trees at that time; would have cleared the timber and brush off of three to five acres of pine land; fenced 10 acres or paid the wages of a grove laborer for one month. Today the same \$50 would pay a grove laborer's wages for 15 days; would buy one-quarter to one-half acre of choice grove land in a

nursery trees; clear one to two acres of land or fence two to three acres. Luckily, the price paid the grower for his citrus fruit has also been considerably advanced, so that he receives from two to two and one-half times as much as he did seven years ago, and from groves of large trees in full bearing he is probably making a higher profit, measured in terms of the purchasing power of oranges than he did seven years ago.

For a grower who is raising a young grove from which no crops, or small crops only can be realized, for years, or in the case of the prospective planter, the capital either may have available will efficiently handle a greatly reduced acreage today when we compare it with what the same capital would have done seven

years ago. Under present conditions of the citrus industry great consideration must be given to all factors of the grove efficiency in order to maintain groves and grove land have an attractive proportion between the cost of building a grove and returns realized, and between the cost of grove upkeep and crop sales on groves already bearing.

One of the most important of these factors relates to planting plans and grove tree arrangement. Referring to high pineland soils, for the purpose of logical discussion, young trees are most commonly planted by the square system either 25 or 30 feet apart each way, making approximately from 50 to 70 trees per acre. Planted 30 feet apart orange trees

## THE CITRUS INDUSTRY

will not entirely utilize the grove space as a general thing until they are from 20 to 30 years of age. Thus the investment in land for a grove under such planting plans does not for a long period of time become an efficient profit-producing factor. In most young trees and plants fruit development is inversely proportional to vegetative development. Thus a fruit tree stimulated to excessive vegetative growth of leaf and branch while it is young, by such means as over-fertilization and unrestricted root and top growth as in wide planted areas, will grow to be a larger tree, but will not come into bearing as early as one on which close planting or dwarf-root stocks puts a drag on the vegetative growth and spread of root and branch and consequently induces earlier maturity and bearing.

Dwarf root stocks for citrus trees are not desirable for commercial groves. If early maturity is wanted it is preferable to use vigorous growing stocks, such as rough lemon, sour orange or grapefruit, according to the soil type and check the vegetative growth merely through close planting, fertilizing the young trees with as much as they can use economically. This same principle is known and practiced by truckers and florists. Closely planted tomatoes produce less stalk and more fruit. Plants or fruit trees set in small pots will have a restricted root and top growth but will flower or fruit heavier.

Two hundred trees will plant four acres on the square system at distances of 30 feet apart each way. The same number of trees will plant one acre at distance of 15 feet each way. Under the close planting system trees 15 feet apart may be left in the grove for seven to ten years on high pineland soils without seriously interfering with grove operations, and during this time will produce from four to seven good crops. At the end of eight or ten years one row of trees may be cut down, having paid for themselves many times over, or they may be transplanted to an equal grove acreage, where they will grow to be as large in three years as an ordinarily planted grove of six or seven years' growth. Besides inducing heavier fruiting during the early years of growth and affording the opportunity to the owner of growing an eight-year-old "nursery" tree at a profit rather than a cost, this plan of close planting greatly reduces the cost of production. As compared with four acres planted with 200 trees, one acre planted with the same number would reduce the cost of cultivation, plowing, disk ing, land and land clearing, fencing and supervi-

sion to one-quarter of what it would be on the former.

In discussing the subject of close planting, growers generally admit the figures and principles of the subject, but possibly to explain their own ways of planting or short-sightedly to convince themselves that an additional outlay of cash for the trees is unnecessary, many of them resort to the old stock excuse, saying that it would be all right if a grower would do as he planned and remove some of the trees when they grew too close to permit grove operations. This point is hardly worth arguing, as the suggestions presented in this article are only intended for growers who have the incentive to plan and the will power to carry their plans into execution. Four or five years later the initial thinning out of trees would be followed by another, leaving the trees equi-distant at 30 feet apart, a good permanent arrangement. The trees removed would plant an equal acreage at 30-foot distances, thus giving eventually the same acreage as would have been secured at the start from a 30-foot planting.

Another good planting plan followed by some of the leading growers of Florida is to set the young trees 20 by 15 feet apart, thus delaying the initial thinning out for another five or six years, and leaving the trees after one thinning out at permanent distances of 30 by 20 feet or approximately 70 trees to the acre.

These plans should be varied to suit soil conditions. On shallow soils which will not grow large topped trees, a permanent distance of 25 feet apart each way or 25 by 18 feet should be figured on, interplanting with young trees accordingly. Ten acres closely planted is a better profit producer for at least 10 or possibly 15 years on high pineland soils than is 40 acres as commonly planted 30 feet apart. One man can efficiently carry on the work on 10 acres of grove, when he alone would fail to do so on 40 acres. With labor hard to secure, and of poor quality and low-work capacity, the inducement is great to concentrate one's efforts and capital on a small acreage. The citrus grower is not in business to grow foliage—he must have fruit primarily. The proportion of fruit he produces for dollars and years expended determines the degree of his success as a commercial fruit grower and as such he is urgently recommended to investigate the advantages of close planting and determining for himself, as did Mr. D. C. Gillette and Mr. August Hecksher, who have recently started a thousand acre grove of Temple oranges to be planted 15 feet apart near Lake Wales,

Florida, and choose the most advantageous method of realizing quick and high profits from citrus plantings, along with a suitable foundation for a permanent grove setting.

### THE TEMPLE ORANGE

We are in receipt of a sample of this fruit and can testify to the truthfulness of all the good things that have been said and that may be said about it. The peel is soft to the touch and is easily removed. And a very noticeable feature is that the peel can be taken away without leaving a lot of the white pulp on the meat, as is the case with many varieties of orange. The peel comes off and leaves the orange ready to be eaten.

But the finest thing about the Temple orange is that the peculiar flavor, the like of which is an unknown quantity in many oranges. Only a few oranges have we eaten that can be said to measure up to the high standard that is shown in the Temple.

We are sure that many more fine qualities could be noted if our sample had not been so limited in quantity. We had to eat the sample at one sitting and in the rush to get up copy for our today's paper, so under the circumstances we feel somewhat handicapped in giving a real idea of the Temple orange.—Tarpon Springs Leader.

### PORTO RICO EXCHANGE TO MAKE BY-PRODUCTS

The Porto Rico Fruit Exchange will soon place on the market a bottled grapefruit juice. It is claimed that a method has been found for bottling the pure juice without the addition of preservatives. The juice is combined with sugar and charged water. The new bottling company will also make its own glass.

The cost of manufacturing is estimated to be \$1.80 per dozen of eight-ounce bottles. It will retail at \$3.60, leaving a margin of \$1.80 for wholesaler and retailer and 20 per cent profit to the company. The lower grades of fruit will be utilized. About \$40,000 will be spent in advertising the new drink in the United States. Other products to be marketed under the name "Tropico" by the Porto Rico Exchange include pineapple juice, marmalade, glazed peel, oil of grapefruit, oil of orange, citric acid and orange juice.

Orange county practically guarantees that it will be able to accommodate 500 people if the summer session of the California Citrus Institute is held at Santa Ana.

# Thirty-third Annual Meeting of Florida Horticultural Society

The thirty-third annual meeting of the Florida State Horticultural society, which held a four days' session in Ocala on May 4, 5, 6 and 7, was one of the most interesting and profitable of the many fine meetings of this society, and was attended by some of the best known horticulturists of Florida and the nation.

Determined to eclipse all former efforts in the way of entertainment of the visitors, Ocala gave a welcome and accorded a hospitality which sent every visitor home a thorough Ocala booster.

One of the most important features of the session, and one which promises great benefit and the lasting perpetuity of the society, was the adoption of a plan for life patrons. Only life members are eligible to become patrons of the society, each patron contributing \$100 to the society for the promotion of its aims. At the meeting 21 individuals, firms and organizations took advantage of this opportunity of furthering the aims of the society. Dr. J. H. Ross, president of the Florida Citrus Exchange, was the first to enroll, and he was quickly followed by other organizations, associations and individuals. It is anticipated that the number of patrons will be still further swelled by additions yet to be made.

Many interesting and instructive papers and addresses were presented by men prominent in horticultural work in the state and nation. The extent of the program precludes the possibility of mentioning each of the excellent papers at length and in detail. To do so would tax the limits of The Citrus Industry beyond the available paper supply. Some of the outstanding features of the program were the addresses by J. G. Grossenbacher of Plymouth, J. W. Sample of Haines City, Miss Partridge of Tallahassee, Charles Dearing of Washington, F. L. Skelly of Orlando, J. C. Chase of Jacksonville, A. M. Tilden of Winter Haven, O. F. E. Winberg of Silver Hill, Ala., and E. L. Wartman of Citra.

A strong feature of the opening session was the intensely interesting address of one of the two living members of the original group of 18 who met in Ocala 33 years ago and organized the society. George L. Taber of Glen St. Mary, the veteran fruit

grower, held his audience spellbound for an hour while he told in graphic terms the history and work of the organization, interspersed with pleasing and amusing incidents. The other original charter member, G. W. Lipssey of Blanton, was on the stage and made an interesting talk that was greatly enjoyed.

The session was opened by the president, H. Harold Hume, in a brief address, in which he referred to Ocala in a most complimentary manner.

Mayor Robert J. Anderson delivered the address of welcome, which was responded to by B. L. Hamner of Valrico. During the evening addresses were made by P. H. Rolfs, dean of the College of Agriculture, University of Florida; H. G. Hastings of Atlanta, and E. L. Wartman of Citra, all members of the society for a quarter of a century.

Very few of the numbers on the program as originally outlined were omitted. Practically every member listed for participation in the program was on hand with a well prepared paper or with an interesting address.

The complete program as presented was as follows:

## Tuesday, May 4

Call to order, President H. Harold Hume, Glen St. Mary.

Opening prayer, Rev. J. J. Neighbor, Ocala.

Address of welcome, Robert J. Anderson, mayor of Ocala.

Response for the society, B. L. Hamner, Valrico.

President's annual address.

Address, "The Florida State Horticultural Society—A Bit of History," George L. Taber, Glen St. Mary.

Talks, "The Horticultural Society; Its Past, Present and Future," J. E. Ingraham, St. Augustine; P. H. Rolfs, Gainesville; H. G. Hastings, Atlanta; E. L. Wartmann, Citra; L. W. Lipsay, Blanton.

Social hour.

## Wednesday, May 5

"Fertilizers"—C. H. Thompson, Winter Haven; George V. Leonard, Hastings; Dr. H. G. Wheeler, Boston, Mass.

Address, "The Standardization of Fertilizer Formulae," J. N. Harper, Atlanta, Ga.

"Machinery in the Grove"—J. G.

Grossenbacher, Plymouth; A. O. Kay, Washington, D. C.; R. E. Lenfest, Apopka; Frazier Rogers, Gainesville. Address, " Implements for Use in the Citrus Grove," J. G. Grossenbacher, Plymouth.

Address, "Types of Spraying Machinery for Use in the Citrus Groves of Florida," R. E. Lenfest, Apopka.

Address, "The Utilization of Tractors as Power for Pumping Units in the Citrus Grove," A. O. Kay, U. S. Department of Agriculture, Washington, D. C.

Address, "The Use of Tractors in the Citrus Grove," Frazier Rogers, Gainesville.

"Avocados"—L. D. Niles, Lucerne Park; W. J. Krome, Homestead; W. D. Carrier, Winter Haven.

Address, "What Constitutes a Good Commercial Variety Avocado," W. J. Krome, Homestead.

Address, "Avocados in Polk County, Florida," W. D. Carrier, Winter Haven.

Address, "Guatemalan and Mexican Avocados Fruiting in Florida," John B. Beach, West Palm Beach.

Address, "Insects Which Attack the Avocado in Florida," G. F. Mozzette, U. S. Department of Agriculture, Miami.

Address, "Some Diseases of Avocados and Sub-tropical Fruits," H. E. Stevens, Gainesville.

Address, "The Pineapple Industry in Florida and Its Future," H. S. McLendon, St. Augustine.

"Packing and Shipment of Citrus Fruits"—F. L. Carr, Arcadia; Ed Arndt, Fort Myers.

"Fruit Products"—C. E. Stewart, Jr., Tampa; J. W. Sample, Haines City; Mrs. C. M. Berry, Sanford; Miss S. Partridge, Tallahassee.

Address, "Fruit Products in Florida," C. E. Stewart, Jr., Tampa.

Address, "The By-Products of Citrus Fruits," J. W. Sample, Haines City.

Address, "Citrus Fruits in Cookery," Mrs. C. M. Berry, Sanford.

Address, "By-Products of Florida Fruits Other Than Citrus," Miss S. Partridge, Tallahassee.

Address, "Grapes and Grape Products," Charles Dearing, Washington, D. C.

## Thursday, May 6

Address, "The Experiment Station," P. H. Rolfs, Gainesville.

(Continued on Page 19)

# The Citrus Industry

ISSUED MONTHLY

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## CITRUS LAND VALUES

The Citrus Industry has had something to say in recent issues concerning the ever-increasing value of citrus lands. It desires to again emphasize the statement that good citrus lands will never again be bought at the prices for which they may be secured today. The ever growing importance of the industry and the development of thousands of acres of new groves in every citrus-producing country is constantly reducing the available acreage of unimproved land suitable for citrus development.

As the available acreage decreases and the demand increases the value of such lands is bound to rise to meet the increased demand.

Good citrus lands, and there are still many thousands of acres of exceptionally fine land of this character, are cheap at the price for which such lands are selling today. But the buyer must differentiate between good citrus lands and lands which are unsuited for citrus development. The former are well worth the prices now being asked. The latter are worthless to the man who desires to engage in citrus culture, although they may be valuable for other purposes.

To one unacquainted with soil types and conditions in the citrus belt, the importance of careful investigation and the employment of expert and trustworthy advice is most essential. A properly planted, properly tended grove on good citrus land will develop into a source of revenue for its owner. A poorly planted or poorly tended grove or one planted on soil unsuited to the growth and development of citrus fruits, will prove a losing investment for its owner.

These are facts which the beginner should remember, never forgetting that the first requisite to success, the cornerstone upon which the entire superstructure must be built, is the adaptability of the soil to the purpose for which it is intended. Fortunately, there are plenty of well posted people throughout the citrus belt who are able and willing to aid the prospective buyer in the selection of his land, and who are actuated by no other motive than that of preventing failures through poor selection—failures which must in the end result in injury to the entire industry. The prospective buyer, when unacquainted with conditions himself, will do well to consult the successful growers and be guided by their advice.

## ONE ANGLE OF LABOR PROBLEM

A recent report on the rate of immigration and emigration gives at least a hint of one phase of the labor situation which few people have stopped to analyze. It

throws a side-light upon labor shortage which cannot be ignored. This report shows that in 1913 there were 1,113,109 more people came into the United States from foreign countries than left for other countries. For the year 1919 there were 45,023 more people who left the United States than came into the land from other countries. Instead of our labor supply being increased by more than one million per year, as was the case before the war, we are now sending laborers out of the country.

The grove owner who is experiencing difficulty in finding labor to properly care for his grove may feel that the immigration situation does not seriously affect him, but it does. Quite a percentage of those coming to this country in past years have gone direct to the farms. Even if this were not the case, the total labor supply of the country cannot fail to affect the farm and grove labor supply. When there is a shortage of labor in any line or locality, wages increase and laborers are attracted from other lines of industry or from other localities. Industries which before the war employed large numbers of newly arrived immigrants at a wage considerably lower than that paid more capable workers, are now deprived of this supply and are forced to pay wages which attract laborers with greater skill. Many farm laborers, or those who under normal conditions would become farm laborers, are now drawn into industries which formerly employed unskilled immigrants almost exclusively.

The only way in which this situation can be met is by maintaining farm and grove products at a price which will enable the owner to compete with other lines of industry in the matter of wages.

It may not occur to the citrus grower that conditions in Europe have anything to do with his labor difficulties, but there is a direct relation if we go deeply enough to find it. One authority points out that the Russian Bolsheviks are operating on some thirteen different fronts, threatening nearly all of Eastern Europe, from which a large part of our immigration came. In addition to this, a half dozen or more other countries are virtually at war with each other, or engaged in the effort to suppress rebellion at home. People will not leave their native country while there is prospect of a fight.

These are facts which should be realized by all who are concerned with the cost of labor, and that means practically everyone.

## FRUIT THE BIG OPPORTUNITY

The young man who desires to engage in agricultural or horticultural pursuits can find no more attractive or promising branch of the industry than that afforded in the growing of fruits, and particularly of citrus fruits.

Much less land is required for this particular line of farm work than for general farming operations. The growing of cotton, corn or wheat requires vast tracts of land, often available only at prohibitive prices. With citrus operations, a vastly less acreage is required, and while suitable lands of this character on hard roads and near markets may be equally as high in acreage value the smaller amount required will enable the young man of small means to acquire sufficient holdings to make a start under conditions which promise success.

Or, if he is not averse to going some distance from market, getting off the hard roads and putting up with some minor inconveniences for a few years, he may still buy the very best of citrus lands at far less than the ruling market value of lands in the cotton, corn or wheat belts. He has, too, the assurance that the increase in value of these lands will be of greater proportionate value in the next ten years than can possibly be the case with lands suitable only to general farming.

All through the citrus belt there are thousands of acres of good citrus land, more or less isolated from centers of population, yet close enough to afford easy access to markets, schools and church privileges to preclude the idea of pioneering. In a few years these lands will be in the center of new and busy communities, with their own hard-surfaced roads, schools, churches and mail delivery at hand and with every convenience of the modern country home within easy reach.

There will never be too much citrus fruit. As the production increases, new uses will be discovered and the consumption will increase with the supply. This has been the case with fruits of every kind. It will be the case with citrus fruits should the time ever come when the normal supply exceeds the present demand.

Citrus growing, too, affords one of the most healthful and pleasant of outdoor occupations. Unlike general farming operations, the drudgery of hard labor is softened by a certain element of romanticism which enters into no other phase of agricultural or horticultural endeavor.

### WHY RURAL TEACHERS QUIT

While not a problem peculiar to the citrus belt, the rapidity with which rural school teachers are abandoning the profession affords a fruitful theme of speculation to every dweller in the rural districts. It is true that salaries are being increased, through compulsion, for otherwise many schools would be closed. But even at that the situation is one which demands the thoughtful consideration of all who would maintain the standard of the rural schools.

The latest report of an investigation by the bureau of education, which is just completed, gives the answer to why there is a scarcity of teachers. One hundred and forty-three thousand teachers left the profession last year. The rural districts were the most affected. There is an annual turn-over of 125,000 teachers who quit for one reason or another. The 310 normal schools in this country will turn out only about 20,000 prepared teachers this spring for next year's service.

The bureau of education picked at random three counties in each of the 48 states and inquired as to rural teachers' salaries. The report came from 8,599 teachers. Averages do not mean much, but in this case the average rural teacher's salary is for men \$711.68 and for women \$629.96. This includes the teachers in consolidated rural schools where the pay is very much better, so you can see what some teachers had to live on.

One man and two women received not over \$100 for a school year. Eleven men and 25 women got the magnificent salary of from \$100 to \$200; 46 men and 189 women were paid from \$200 to \$300; 118 men and 483 women got from \$300 to \$400; 116 men and 909 women received from \$400 to \$500; 139 men and 1,321 women fattened on from \$500 to \$600 salaries; 220 men and 1,536 women got the magnificent salary of from \$600 to \$700 for teaching rural children. This is the place where the increase in numbers decreases as salaries advance; 129 men and 910 women were able to pull down salaries ranging from \$700 to \$800; 121 men and 658 women got from \$800 to \$900 a year; 98 men and 500 women were paid from \$900 to \$1,000 for their services to rural children. Only a scattering few got beyond \$1,000 salaries.

This is the story. Money talks. If a girl can get better pay for clerking or office work, why should she go to the country and do janitor work and put up with the usual inconveniences in rural schools? Your hired

men are doing the same line of thinking. Your sons and daughters follow the lure of the almighty dollar. Wherever the lure is, that country school has good teachers, especially in consolidated schools where there is a teaherage in which the teachers can live their own life.

This is purely a rural school problem. The cities may sympathize but cannot help. Localities alive to the menace of a teacher shortage are already boosting salaries so as to keep the schools open. To put in unprepared teachers just because they are willing to accept low salaries is a calamity. Better close a school than have it taught by one who does not know how to teach. No farmer will pay a city man who knows nothing of farming as much as he will an experienced hand.

### THE PEACE TREATY DEAD

Averring that they and they alone were true Americans, a little coterie of willful men in the United States senate, headed by the senile senator from Massachusetts, have killed the peace treaty and the league of nations.

Endorsed by America, the League of Nations would have placed the United States in position to dictate the peace of the world. With America in the League, the United States would have been the leader among the nations for all time to come. With America out of the League, the League becomes meaningless, and America occupies a position of "proud isolation," exceeded only by our turbulent neighbor on the south—and all through the willful action of a handful of petty politicians who love their party more than their country.

When history is written by future generations, the names of the little coterie of malcontents who defeated the ratification of the peace treaty and the League of Nations will go down to posterity with those other reactionaries who in times past have retarded the progress and advancement of the nation for petty personal or partisan ends.

### THE "RIDGE" SECTION

All Florida is alive with the color of early summer, the fragrance of flowers is in the air, the green of the woodlands, the shimmer of sunlight is on the land and the sheen of water dazzles the eye. But in all this wonderland of beauty and fruitfulness, no section exceeds the "Ridge" county of Polk County, known variously as the Florida Highlands, the Lake Region and Nature's Playground, any of which are fitting titles of its wondrous beauty. To know this favored section in all its glory, one must see it from the tonneau of a touring car at close range. Such a trip will be well worth the while of any lover of nature in garb of summer verdure.

We have just been reading an old paper printed in January, 1916. From its columns we discover that away back in those old days people were discussing the high cost of living. Just as though they knew anything about it in those days!

The Tenth National Orange Show held last month at San Bernardino was pronounced without exception the best show of the kind ever held. The exhibits surpassed in both number and excellence those shown at any previous show.

It is to be regretted that politics was permitted to step in and cut down that federal appropriation for the eradication of citrus canker. It is just such acts as this which tend to keep the South solid.

## Methods of Handling Tree Wounds

By Arthur N. Duke

Wounds to citrus and other trees properly should be dressed and cared for, just as are wounds to animals and humans upon the place. Generally speaking, they should be handled promptly, but there is a profit to growers in looking after such wounds carefully even if they may have been made some time before. An uncared-for wound may continue to grow worse and serve as a breeding place for infection which will spread elsewhere.

Many an old tree with serious wounds or cavities may be revived and live and bear for a number of years if given proper attention. Tree surgery has come to the front in recent years, and many remarkable things today are done for particularly cherished trees, where a few years ago the ax would have been used remorselessly. The methods of modern tree surgeons, who are true specialists in their line, may be studied by citrus growers with considerable advantage to themselves. Up to this time the tree surgeons are somewhat few, and the bulk of their effort has been in behalf of owners of large estates who desired to save some particularly fine shade or ornamental trees. However, the methods thus used are equally applicable to citrus trees, and may save many a fine old tree if used in time.

Unless wounds in trees are properly dressed decay sets in. This progressively saps the life of the tree affected, and the decayed and decaying wood also serves as a breeding place for various fungus spores which may affect other trees in the grove and necessitating spraying expense equal to many times the cost of carefully dressing the original wounds.

Every progressive citrus grower realizes the need for extreme care in pruning. A careless or incompetent hand with the pruning shears and saw may cause many unnecessary wounds to trees, the effects of which may be far-reaching and expensive. Careless or improper pruning often is the start for many grove troubles, which otherwise might have been avoided. Cuts made in pruning always should be parallel to the part of the tree from which the wood is removed, with care to avoid unnecessary stubs, and the greatest care to avoid torn bark or tissue. Where it becomes necessary to remove limbs or large branches, they first should

be sawed half way through from the under side, then finished by sawing from above. If very large it will be advantageous to brace by ropes from other limbs or branches to avoid tearing the bark.

Wounds resulting from the removal of branches at once should be given a coat of asphalt paint, or of white lead and oil to prevent the entrance of moisture. Injuries to the bark should be carefully smoothed off and treated in the same way. Coal tar may be used as a protective coating, but asphalt paint or white lead generally are given the preference by the experts.

What the botanical scholars term the "cambium layer" of the bark is the live tissue which needs most attention. This is the inner layer of the bark which lies next to the heartwood layer. It is at this point that the growth in thickness takes place and the active life of the tree centers. If this cambium layer be destroyed the heartwood is left unprotected and is readily subject to attacks of decay. If the heartwood be protected from moisture by artificial means, and the cambium layer be given a chance to cover the edges of a wound, as it will do in a reasonably short time by its own protective growth, many a tree with otherwise a small chance of living may be saved.

Thus it is possible to save many a tree with a bad cavity in trunk or main branches if properly gone about. Where cavities have resulted from decay, however, the method of treatment is not so simple, and must be handled carefully. First, it is necessary to remove every portion of decayed wood with gouge or chisel, using extreme care not to remove any more wood than necessary or to aggravate the wound unduly, though being sure none of the infected wood is left. After thus cleaning the cavity it should be carefully disinfected. A corrosive sublimate solution is best for this. Bichloride of mercury solution (one to one-thousand) also may be used, or crude carbolic acid, diluted one-half with water in which a little soap has been dissolved. It is useless to apply the disinfectant until after every bit of decayed wood has been removed.

The cavity then should be concreted with a mixture of cement and sand. If it is a small cavity it may be filled solidly. Fine sand should

be used in the proportion of two parts of sand to one of cement. It should be wetted thoroughly and well mixed, but too much water should not be used or the mixture will be runny and impossible to handle in filling a vertical cavity. Also a too wet mixture will shrink greatly in drying out.

In large cavities the filling should be put in frequent sections, separated by tar paper in layers to allow for expansion and contraction, and for the swaying of the tree in heavy winds. Very large cavities require bracing, which may be accomplished by driving spikes in proper places after the cavity has been cleaned out. Where the cavity is extra large it is well, also, to reinforce the concrete by a small section of chicken wire to give greater strength and prevent cracking.

In all cases, whether of small or large cavities, the surface of the finishing layer should be rounded carefully to the shape of the tree. This finishing layer should come just to the inside of the inner bark where it meets the edge of the cavity. This will permit the cambium layer of the bark to roll outward over the filling in its growth and protect the edges of the wound. A groove should be made about the edge of the cavity, and at the bottom it should slant downward and outward to prevent the entrance of water between the wood and the cement filling. In all but very small cavities a piece of woven wire should be nailed inside the opening just before the finishing coat of cement is applied, and the finishing coat should be carefully worked through and around this reinforcing to assure its binding firmly to the inner cement. After the cement surface has dried thoroughly it should be carefully waterproofed with one or more coats of a good asphalt paint.

Cavities and splits at the crotch of two limbs are difficult to handle, but much may be done by a careful and intelligent worker. Generally it is necessary to brace the limbs together by chains or wire rope braces. This is necessary, for the movement of the edges of the cavity or crack must be reduced to a minimum if the treatment is expected to stay in place. After this is done the treatment should proceed the same as in an ordinary cavity.

(Continued on Page 15)

# Citrus fruit By-products

By J. W. Sample

Paper read at St. Horticultural Meeting, Ocala.

(The following excellent paper on citrus by-products was read before the meeting of the State Horticultural society at Ocala by J. W. Sample of Haines City. Mr. Sample is an authority in the citrus field and anything from his pen is certain to attract wide attention. His paper on citrus by-products cannot fail to have a wide effect and to command the respectful consideration of all citrus interests.)—Editor.

The necessity for some method of utilizing our off-grade or unmerchantable citrus fruits in Florida has prompted quite a number of our enterprising citizens to devise ways and means for converting the culis and other low grade fruits into some merchantable products, and has already resulted in the establishment of some factories for this purpose.

The fact that the by-products to be obtained from the low grade citrus fruits can be converted into food-stuffs has been successfully demonstrated, as several factories are now operating in the manufacture of juices, marmalades, jellies, pectin, gelée, Calif., has achieved some success along this line.

Most of the efforts in the preparation of grapefruit juice have proven failures, due largely to the fact that an attempt was made to pasteurize and express the juice with some of the pulp held in suspension, but there are some factories now in operation which are putting out a clear grapefruit juice successfully, and in my opinion there is no better fruit juice on the market, the only question being to get it to the consumer in an unfermented, palatable form. (Some people might not object, however, to its being fermented, if it had a little "kick" in it.)

The citrus fruit growers are just at this time confronted with a great loss by virtue of the fact that they have been unable to market their grapefruit, due in a measure to lack of transportation facilities, strikes, etc., demonstrating very clearly that they need some avenue for disposing of this class of fruit and prevention of this great waste. This season, in many instances, half the crop of grapefruit has dropped to the ground and decayed, while if we had by-product factories to utilize these drops, the growers would not have suffered such a loss. To my personal knowledge there are now some fac-

tories in contemplation to help take care of the enormous amount of un-used fruit. Surely no food products should go to waste under existing conditions, when everyone is complaining of or fighting the high cost of living.

In my opinion the greatest attainment in by-products production is marmalade base, which is to be used principally in the manufacture of marmalades. There seems to be practically an unlimited demand for this product and at remunerative prices. There also appears to be a great future for the pectin procured from citrus fruits. It is being made now in large quantities and is taking the place of apple pectin, which has heretofore been so popular.

Orange juice has been made up in a dehydrated form, having been reduced to a powder. It was palatable and delightful, but not practicable commercially. The essential oils, however, obtained from oranges, lemons and limes are of great value, and are very scarce, as practically all of such oils are imported. Prof. E. M. Chase, chemist in charge of Citrus By-Products laboratory of Los Angeles, Calif., has achieved some success along this line.

"Necessity being the mother of invention" has turned many of our good people to studying the problem of the utilization of our unmerchantable citrus fruits—more particularly grapefruit, as our loss from the dropping of grapefruit is much greater than that of oranges, and the field for developing by-products from grapefruit is more extensive than that of oranges. I speak more particularly of the base products—juice and pectin.

Just suppose, for illustration, that we were selling all of our cul grapefruit, which I believe this year would amount to over 2,000,000 boxes, at \$1 per box to these factories. That would mean a saving to the growers of \$2,000,000. Then again, we might add to this another million boxes, which we could very easily spare from our fourth grade, or Duke brand. Following this method, we would not only get all this grade of fruit was worth, but we would eliminate this low grade from the market, offering for sale only our best grades of fruit, and obtaining better prices, as the poorer or cheaper prices would not interfere. As I see it, the marketing conditions, it is the off sizes and imperfections in the fruit that reduces our prices so mate-

rially. Good fruit will always bring good prices.

When the grower realizes that it has cost him just as much to produce the fruit that has dropped to the ground and decayed or has been culled by the packing house and hauled to the dump, then only will he put forth his best efforts to have this class of fruit converted into some product which will prove a profit to him.

In view of the fact, ladies and gentlemen, that we have not as yet been able to establish a market for our low grade fruit except to put it in competition with our good fruit which has proven a menace, as the housewife who goes to the merchant to purchase oranges or grapefruit usually asks the price with no consideration as to grade, quality or size, thus the low grade fruit often establishes the price of good fruit, as the merchant who can sell the most fruit for the least money, regardless of grade, quality or size, gets the business; it behooves us to make some provision for the utilization of these poorer off-grade fruits.

Through the co-operation of the grower there may be established factories, and I may say this is now being done in Polk county, through the Florida Citrus Exchange and its tributary organizations, and from present prospects this by-product adjunct is going to prove more beneficial to the grower of citrus fruits than any other factor except the Exchange itself.

#### PROF. A. B. CONNOR BUYS

#### BIG GROVE IN LAKE COUNTY

Prof. A. B. Connor of Bartow, one of the largest farmers and fruit growers of that section of Polk county, has purchased the 200-acre farm and grove of C. H. Wilson which lies on the north side of Lake Minneola, one of the largest and prettiest lakes in "Alpine Florida." This farm borders on this lake a full mile and is one of the finest farms in this vicinity.

This section of Lake county is forging ahead by leaps and bounds, and is rapidly becoming the mecca for a large number of investors, this being the third grove sold within the past three weeks, while quite a number of the people who spent the winter here have purchased homes and will make the metropolis of "Alpine Florida" their winter home.—*Leesburg Commercial*.

# Citrus fruit Industry of Marion County

By G. L. Wartmann, Citra

(An interesting and timely history of the citrus fruit industry of Marion county was prepared by Mr. E. L. Wartmann of Citra for distribution among the members of the Florida Horticultural society at the recent meeting in Ocala. This interesting bit of history is so intimately interwoven with Florida citrus conditions today that it is presented entire, together with the foreword of the author).—Editor.

#### Foreword

Members of the Florida State Horticultural society, Ocala welcomes you! This is your home, your birthplace.

At a meeting of the Florida Nurserymen's association, in the parlors of the Ocala House, April 10, 1888, at which were present members of the Fruit Growers' association and other horticulturists, the Florida Horticultural society was born.

On February 20, 1889, the Florida Horticultural society entertained the Georgia State Horticultural society and the American Pomological society, in the great building of the Semi-Tropical exposition, in Marietta City, just west of the present Marion county fair grounds, in Ocala.

And now, on the 4th to the 7th of May, 1920, you are gathered here again, with your headquarters again in the Ocala House, for your thirty-third annual meeting.

We ask you to accept this brief history of citrus growing in Marion county as a memento of your own home and the home of the orange. Mr. E. L. Wartmann, who for 44 years has been identified with the citrus industry in this county, has been kind enough to prepare this sketch.

To accurately outline the citrus industry of Marion county requires going back to the days of pioneering, and to a period long before the boundary lines of the county were established.

#### Wild Orange Groves

The early writers of Florida history tell of the wild orange groves located in central-south Florida; and soon after the territory of Florida was ceded by Spain and assumed her statehood, many planters from the Carolinas and Georgia came to this section to grow sea island cotton—a product then in great demand and highly profitable. In clearing these plantations for cotton planting, it

was necessary to destroy thousands of wild orange trees. Most of this area of wild citrus trees was located in Marion county, largely on the southern and western boundaries of Orange lake and along the valley of the Ocklawaha.

#### A Native Fruit

This brief history is merely given to establish the fact that where the orange tree grows wild, it must, therefore, in its native element, find conditions of soil most suited to its nature.

#### The Year 1870

About the year 1870 the idea was advanced that these wild orange groves could be developed into a paying enterprise, and so the orange industry was inaugurated.

On the southern shore of Orange lake large tracts of land were acquired by farseeing individuals, and by grafting and budding the wild orange they shortly thereafter enjoyed the realization that they had successfully started a business which was to make Florida famous, and a pleasant occupation to follow.

#### On Orange Lake

A small village in the northern portion of the county, and bordering on the south shore of Orange lake, was, during the years 1892-93-94, the largest shipping point for citrus fruit in the world, and from that point was shipped out about 20 per cent of the entire crop of the state. During that period about one-tenth of the taxes collected in Marion county was derived from assessments against the orange groves bordering Orange lake. From the railroad station referred to was shipped, during the season of 1894, approximately one-half million boxes of fruit. Also, from the various groves of this lake region, were shipped enormous quantities of both sour and budded trees for groves being set out at points farther south, and to Arizona and California.

#### The "Pineapple"

Marion county may truthfully claim the distinction of introducing the most sought after orange grown for the markets up to the present time. This refers to the "pineapple" variety, which is distinctively of Marion county origin. This orange is unsurpassed in color, smooth texture and shipping qualities. During the past season fancy fruit dealers have bid as high as \$12.75 per box in the auction rooms of New York City in order to obtain this variety of orange.

proving conclusively its merit and popularity.

The name "pineapple" is derived from the aroma of the fruit, and not its flavor. Anyone familiar with this orange can readily detect its presence in a packing house where there are but a few mixed in with a house full of other varieties. The soil in the Orange lake region is peculiarly adapted to the culture of this particular orange, and in no other place in the state of Florida can the deep orange red and the quality of the fruit be produced in successful competition.

#### The Parent Tree

The parent tree of the "pineapple" orange was one among a few sweet or "china" orange trees growing around the home of a cotton planter, Dr. James B. Owens, a few miles south of Orange lake. One of the first growers of oranges in that section, Hon. P. P. Bishop, on a visit to this plantation, was struck with the general appearance and quality of the fruit he noticed on the tree. He purchased from Dr. Owens the tops of nine trees of his selection, the fruit of which was of especially smooth peel "seedling orange." These tops were cut into bud wood and then grafted into the wild orange trees in his grove at Citra. In time, when these budded trees were brought to bearing, and the fruit sent to the packing house, an odor was detected, very different from that of the ordinary orange, and not unlike that of the pineapple; this variety of fruit was afterwards known as the "pineapple" orange.

#### Parson Brown

Marion county may further point with pride to the "Parson Brown" orange, known to be the most perfect early orange grown.

This fine variety of orange was discovered within a few miles of the line of Marion county and is largely the variety grown in the Lake Weir section. Only a few months since a leading fancy fruit house in the north invested nearly a quarter of a million dollars in groves of this variety at Lake Weir, thereby showing their faith in Marion county as a fruit growing section.

Frequently the question is asked: Why, if Marion county was the first and greatest citrus producing county, has it not kept pace in this enterprise with the sections farther south?

(Continued on Page 17)

# Effect of Tractors on the Size of Fruit.

Chas. W. Hawkins

As most everyone knows, the tractor has been growing rapidly in favor among fruit growers of all kinds. The following quotation from the American Fruit Grower for April explains this in the following language:

"Although seasonal working periods exist on practically all farms, their duration varies with the type of farming followed. On most fruit farms these working periods are confined to an even smaller number of days annually than on farms of a more diversified type.

"On many fruit farms and vineyards there is little work of cultivation or other operations for which horses can be used excepting during comparatively limited seasons. While there may be a little hauling of manure, fertilizer, etc., on some farms, and the hauling of the spraying outfit on nearly all, this does not generally amount to a great many days' work annually. Until the last few years the horses which were needed for the work of cultivation could be used to good advantage during the picking season in hauling the fruit from the orchard or vineyard to the packing house, and again from the packing house to the railroad or other point of delivery. In fact, more were often needed for this work than for any other, although they were not entirely satisfactory for the reason that speed in hauling was of great importance, and yet at the same time the hauling must be done without injury from jolts or jars in transit.

"During the last few years the motor truck has demonstrated that it possesses numerous advantages over

the horse and the horse-drawn wagon for this kind of work, and fruit growers all over the country are rapidly adopting the motor truck for these operations, even though they have very little use for it during the remainder of the year. This fact makes the tractor of greater value to the fruit grower than heretofore, since if horses are not needed or used during the picking season, it makes the cost of their work in cultivation proportionately higher. Obviously, the fewer days horses are employed on the farm the higher will be the cost per working hour and the greater the advantage of substituting the tractor."

Because of the advantages of the tractor over horses for orchard work, they are becoming very common in fruit growing districts, so there is nothing novel about the use of the machines for this work.

Another novel feature is the special equipment on the wheels of the motor truck; both front and rear wheels are fitted with metal rim extension rims. These are for the purpose of furnishing additional bearing surface for the wheels when the tractor sinks into the soft, sandy soil, on which many of the orchards are located. These rims are of smaller diameter than the rubber tires and on a hard road do not touch the ground at all, but in a soft orchard they come into action as soon as the rubber tires sink into the soil, and prevent the truck from sinking too deeply; the extension rim on the rear wheel has corrugations to give additional traction.

It is hard to say which is most

popular and valuable for orchard work, the tractor or motor truck; both are filling a long-felt want. The combination of the two makes an ideal equipment. The tractor takes care of the cultivation and can assist, if necessary, in the hauling, but is generally used for this work only in emergencies. The truck not only brings the fruit from the orchard to the packing house, but from the packing house to the railroad station. And the farther from the station the orchard is located the greater is the advantage of the truck. In fact, the truck makes it possible to locate an orchard much farther from the railroad than was practicable where horses were used for hauling. This feature alone has added thousands of dollars to the wealth of fruit growers, since it enabled them to locate on land which could be bought at low price, because of its previous inaccessibility, but which is almost as valuable when a motor truck is used as land close to the station.

This feature is, of course, more valuable in the case of the more perishable fruits; every minute counts in getting them to the consumer, and the jolting received from the horse-drawn wagons is a point to be considered.

This accounts for the great popularity of the motor trucks among orchardists in this part of the country, where profitable orchards are often located several miles from the railroad, and the fruit hauled to the station by motor truck.

Standardizing on equipment is also an added feature for orchardists in this work.

## PLANT BOARD ISSUES

### WARNING TO GROWERS

The Florida plant act of 1915 prohibits the movement of all nursery stock from the property on which grown unless first inspected by agents of the plant board and accompanied, when moved, by the board's certificate of inspection. While fruit growers were much alarmed over the movements is as great now as it ever citrus canker situation from 1915 to has been.

1918, this law was very generally To date the plant board has successfully prosecuted 16 parties for there has been a growing tendency violating this provision of the plant to disregard this law, perhaps, because some think there is no longer any danger from citrus canker.

Plant Commissioner Newell points out that canker is not the only serious pest which may invade the fruit high.

growing properties of the state. The

black fly, which is prevalent in the Bahamas, Cuba and other nearby islands, is as much to be dreaded as canker. There are also the Japanese beetle and oriental peach moth, both very serious enemies of stone fruits, such as peach and plum, which must be guarded against. The necessity for a strict observance of the laws certificate of inspection. While fruit movements is as great now as it ever citrus canker situation from 1915 to has been.

To date the plant board has successfully prosecuted 16 parties for violating this provision of the plant act. Fines, ranging as high as \$50 were imposed in 15 of these cases. In

the other one the defendant, owing to mitigating circumstances, got off with costs which were unusually high.

The board is convinced that the

full enforcement of this requirement of the law is the only thing that can prevent the fruit industries of the state being threatened with another calamity such as that which existed when the citrus canker was introduced into the state and widely distributed on shipments of nursery stock. The board will therefore continue to make every effort to apprehend violators and bring them to trial.

R. N. Wilson, secretary of the California agricultural legislative committee, has established permanent headquarters in Sacramento. He was formerly farm adviser for Riverside county. The committee will initiate and encourage legislation to foster and protect horticultural and agricultural interests of California.

# The Prosperous "Ridge" Section

Whatever one may think of other sections of the Florida citrus belt, all are ready to concede that the Ridge section of Polk county contains many attractions for the citrus grower which are at least the equal of any other section. Partisans of the Ridge section (and every resident is a partisan) declare that it possesses advantages superior to any other portion of the "belt."

It is not the purpose of the writer to attempt to decide between conflicting claims of rival sections, but merely to set forth some of the actual conditions prevailing in this favored land of hills and lakes and valleys, with its beautiful scenery, its magnificent asphalt roadways and its fast developing groves.

From Haines City, the northern "gateway" to the Ridge country, to Frostproof, in the extreme southern end of the county, the traveler along the magnificent highway sees what at first view appears to be one vast citrus development project. When viewed more closely and subjected to the searchlight of analysis, this proves to be a succession of development projects, ranging from the forty-six hundred acre project of the Mammoth Groves and the thousand acre Temple orange grove near Crooked Lake, to the modest five or ten-acre tract being put out by some ambitious and far-sighted individual grower.

One driving through this section today and noting the many fine young groves now just coming into full bearing, and the hundreds of other younger groves which have just yielded their first return of golden fruit to the owners, can scarce believe that eight years ago practically all of this vast and wonderfully productive citrus land was "wild" land, covered only with its growth of native pine and palmetto, with an occasional grove of oaks or a scattered cypress thicket. Yet such is the case. From a point a few miles south of Haines City, clear down to the DeSoto county line, this prosperous and fast-developing section was in the "raw" state. Only here and there was to be found evidence of a "clearing." Citrus groves were unknown, save for here and there a few trees surrounding the home of some pioneer or an acre or two set out by some presumptuous invader from the north.

Where now are the prosperous and thriving little cities of Dundee, Lake

Wales, Crooked Lake, Frostproof, while on to the south, down to and many other progressive communities, there was then nothing but a wilderness of "turpentined" pine trees and blackened stumps. Land values were nil, and the land itself of

Frostproof and over the DeSoto county line to Avon Park and Sebring, the work of planting is being carried on.

At Lake Wales are the headquarters of the Irwin A. Yarnell properties, including the Highland Park Development project. Here, too, is the headquarters of the Mammoth Groves, a project for the development of 4,600 acres of citrus land. Already 1,000 acres of this tract has been planted and the work of clearing the remainder is now under way.

Another development project which has headquarters at Lake Wales is the Hesperides Groves, which is a colonization and improvement project of the semi-exclusive type. The property is located a few miles east of Lake Wales on the Seaboard railroad, where a town and grove property is being developed.

In this same section is the thousand acre tract of the Gillett-Hecksher interests, where the entire tract of 1,000 acres is being planted to Temple orange trees. It is the purpose of the owners to set out 200,000 Temple orange trees on this tract, and the organization of the company is now under way.

What the rapid development of citrus groves in this section means to Lake Wales may be seen in the fact that the shipments from that station during the season just closed more than quadrupled the shipments for the previous year. Ambitious citizens are now talking of the time when they hope to eclipse the shipping record of their sister town to the north, Florence Villa, which this year shipped more than a half million boxes of fruit through one packing house.

And it is here, among these breeze-swept hills, beside these beautiful lakes, amid these health-giving pines, high above the sea where malaria is forgotten and the inertia of the "low countries" is unknown, that some of the greatest citrus development, not only in Florida, but in all the land, is now in progress.

While no part of the Ridge country has as yet attained anything like its full development, and while new groves are being planted from one end of it to the other, it is the territory around Lake Wales and from that point south to the county line, that the greatest evidence of activity is to be seen. This doubtless is due to the fact that the original development began at the north end of the Ridge and has worked gradually to the south.

Around Lake Wales and Crooked Lake literally thousands of acres of new groves are being developed,

That this section is recognized as one of greatest promise in citrus development is attested by the fact that ground is now being broken for the erection of a million-dollar crate and box mill which expects to employ 1,000 workers when the plant is completed. It is hoped that this may be in time for the next shipping season.

Six miles to the southeast of Lake Wales is the town and community of Crooked Lake, famed throughout Florida as the "playground of the state." And, indeed, nature seems to have designed this particular beauty spot as a playground and recreation center for the people of the south.

Crooked Lake itself is one of the

most unique and charming of the many pretty lakes of South Florida. As its name implies, this lake lacks the uniform contour of shore line so common with the lakes of the region, being of uneven formation, with many inlets and bays, with crooks and turns, with alternate high banks and sloping, sandy beaches, but with everywhere along its winding shore line the shade of native oak and pine.

Here the development projects are of two distinct kinds. The Crooked Lake Improvement company is engaged in developing the town site, while the Hendel and other development projects are with equal vigor developing the citrus lands surrounding the town and lake.

The town site proper includes some 280 acres of high, rolling land lying at the end of the lake and embracing some of the finest natural scenery to be found in all South Florida. The streets have been paved, parkways established, public gardens established, lighting systems installed and other improvements of the modern city are being made. A fine golf course of nine and eighteen holes is being laid out and a club house will be erected. It is the plan to make this a South Florida affair, the membership being scattered among the towns of the Ridge and the adjacent territory. A fine tourist hotel is being planned and it is the purpose of the promoters to make of this the great interior tourist city of the state.

But the citrus industry is not being neglected. Steps have already been taken for the establishment of a packing house and by next shipping season it is expected that Crooked Lake will be prepared to take care of its own fruit shipments.

Better known than the section of the Ridge with which this article has dwelt, because older and more fully developed, and forming a particular corner all its own, is the thriving, prosperous and justly famed region of lakes and hills of which Winter Haven and Florence Villa form the center.

In all this land of sunshine and flowers, of pretty lakes and charming woodland, there is no spot where nature has been more lavish of her favors or where man has more generously aided nature in development, than in the country surrounding these two pretty, busy towns.

Here centers the great shipping activity of the county. Of the eleven million or more boxes of citrus fruits shipped from Florida this season, roads and dip into the by-ways if he Florence Villa and Winter Haven are would see this development at its credited with the shipment of more height.

than one and one-half million boxes.

The Florence Citrus Growers' Exchange, of which C. C. Commander is the manager, estimated at the opening of the season that it would ship 300,000 boxes. Later this estimate was revised and the figure placed at 350,000 boxes. On May 15 the figure stood at a half million, with the shipping season on grapefruit still in full swing and with thirty days to run. So heavy became the receipts of grapefruit early in the month of May that Mr. Commander found it impossible to handle all of the offerings through one packing house and took over the operation of the newly completed Winter Haven house, said to be the last word in Florida packing house equipment, having a capacity of twenty cars per day, also taking over the operation of one of the plants at Orlando to care for the excessive offerings of fruit. This association was organized 1909 with a membership of 30, and its shipment for the first season amounted to 78,000 boxes. It is now counted a 100 per cent organization, with a membership of 216 and with shipments this season of over a half million boxes.

In spite of the worst labor conditions ever experienced, in spite of freight and express embargoes, shortage of cars and other hindrances, the work has been handled efficiently and with profit, although Manager Commander says that the one redeeming feature of the season's work has been that a good supply of boxes has at all times been available. This house, it is said, handles more fruit than any other one packing plant in the state.

On May 4 Manager Commander estimated that 40 per cent of the grapefruit handled by his association was still on the trees and that he would be unable to make the final shipments before the middle of June.

It is the territory around Winter Haven and Florence Villa, the strip running down from Davenport to Lakeland along the main line of the Atlantic Coast Line, and the Ridge section from Haines City to Frostproof which has given to Polk county its reputation for supremacy in citrus production, and it is this territory which is doing so much to maintain the reputation thus established.

To realize the extent and magnitude of the development which is being carried on throughout this section, one must visit it himself, and he must get off the main-traveled roads and dip into the by-ways if he would see this development at its

### Handling Tree Wounds

(Continued from Page 10)

For smaller cracks in crotches asphalt paint thickened with good clean sawdust which has been properly disinfected makes a good filler. This will keep out water, yet it remains thick and sticky and will not crumble and fall out as will cement if used in the same places.

For ordinary small wounds, such as are sometimes made by wagon hubs or which occur in some similar way, it is generally sufficient to smooth out the wound with a knife, disinfect and then coat with asphalt paint, white lead or coal tar, and nature will do the rest. If, however, such wounds have been allowed to go until decay has begun, it is necessary to remove every vestige of decayed wood before starting the treatment.

Speaking of decayed wood, I ran across a most unusual thing recently in the grove of a very progressive grower. We are accustomed to think of a crematory as a place where the body of some lately departed human is incinerated, and the ashes placed in an expensive vase to stand upon the parlor mantel, or to be distributed to the winds from some high point by the relatives of the departed. However, I ran across a brick structure a slight distance from the main grove, which I was told was the private crematory. It consisted of a brick chimney some seven feet high, with a brick chamber or fireplace, the front of which closed by an iron door. I found it the custom in this grove to burn in this crematory every bit of dead or decayed wood and all cuttings which may be removed from this particular grove. The owner tells me it is saving them hundreds of dollars a year in spraying, because in this way they get rid of countless millions of fungus spores and other grove enemies. It looked to me like a mighty good thing, and something which ought to be in operation in connection with every citrus grove everywhere.

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The San Diego Union states that the Chula Vista Citrus Growers' association has under consideration the plan of taking over the two packing plants at Chula Vista which belong to the San Diego Lands, Inc. If this is done, it will give the association additional floor space of 65,000 to 75,000 square feet and will enable them to handle a greater volume of fruit. It is stated that the land company will have no further use for these plants when the lemon groves are sold to individuals.

# Motor Trucks an Aid to Fruit Men

By J. E. McPherson

No one can travel through the isolated farms here and there, but is citrus belt, whether it be in Florida national in extent and making rapid or California, without having the progress in every fruit growing conviction thrust upon him that the groves are fast becoming motorized. Indeed, the manufacturers and dealers in trucks have come to recognize the fruit growers as among their best and most profitable customers. And what is true in this respect as regards the use of trucks by fruit men, is equally true of tractors and other motor-driven machines. The fruit of California, in speaking of his orchards and the citrus groves are fast becoming motorized.

To some extent, at least, this rapid motorization of grove and orchard equipment has been hastened by the shortage of the labor supply and the need of the grower to utilize every labor-saving device to conserve time and protect himself from conditions which a few years ago were undreamed of. Without the use of modern motorized machinery, the citrus fruit grower, of today would be wholly unable to meet the demand for labor in his grove or to properly market his fruit without sustaining serious loss through delay in reaching packing house and market.

In discussing this subject in the American Fruit Grower, George L. Sherman presents a comprehensive review of the entire fruit situation and its dependence upon modern motorized methods.

In the growing of fruit, the time consumed in performing any kind of work is a vital factor. In many operations, such as the calyx application of spray to an apple orchard, time is the big item. In hauling fruit to packing house and market, time again is an important item, for the sooner the fruit is put into storage after it is picked, the longer it will keep in good condition.

Even in bringing fruit trees into bearing, the time element enters, and top-working often is resorted to in order to bring fruits of new varieties into bearing most quickly. And to facilitate the use of modern equipment, such as motor trucks and tractors, trees are being set at wider intervals. The wider rows permit the movement of power vehicles with the greatest speed and the least chance of injury to the trees.

#### Power Vehicles Are Necessities

This motorization of the farm is not localized. It is not confined to

but increase the profits.

#### Every Farm Its Own Truck

It is only in very recent years that the motor truck has come to be regarded as a transportation machine for the fruit farm. But with the headway it is now making, every fruit farm that produces fruit in commercial qualities will in a very few years have its own truck equipment, while fleets of others working on a "job" basis will serve the smaller places. Every fruit grower knows this and is doing his part to bring it about. He has perhaps unconsciously aided in this present-day movement by hauling more or less of his own fruit in his automobile. The speed with which such hauling could be done and the superior manner in which the fruit carried through caused many automobiles that had served their usefulness as passenger vehicles to be converted into trucks.

Although this make-shift served a good purpose for the fruit grower, it had an indirect effect that extended clear back to the manufacturer of motor trucks and tires. The result is that manufacturers now are changing the form of tire equipment from the solid to the pneumatic on motor trucks for fruit growers. The cushioning effect of the pneumatic tires on the made-over automobiles enable the fruit to carry through with the least amount of bruising. But until a few years ago pneumatic tires had not been constructed so as to withstand the severe strain of motor truck service. American initiative and the ability to do the impossible has made it possible now to equip even the larger motor trucks with pneumatic tires.

Lately I was interested in observing the service of motor trucks in several prominent fruit-growing localities, and in some of them I found that very serious transportation difficulties had very largely been overcome through the use of the pneumatic tires of large diameter and studded tread. In Florida, where the soil is a loose sand, there is a good deal of difficulty experienced in getting any kind of a motor-driven vehicle to make satisfactory progress. But the Florida citrus grower is wide awake to up-to-date equipment of every kind, and of course is putting the motor truck to good use. Thousands of miles of paved and hard-surfaced roads are fast remedying

Many fruit men are finding it distinctly to their advantage to have their motor trucks equipped with the new style pneumatic tires, because of the cushioning effect of the tire and the reduction of jolting to the minimum. As such tires are provided with an anti-skid tread, they give good traction even in the loose sands or in mud. The careful and speedy transportation of fruits plays the same role in the temperate zone that it does in the sub-tropics. It is the same in the apple orchards of New England, the berry fields of the Ozarks or the citrus groves of Florida. Speed, gentle carriage and the certainty of getting through are the elements which not only save time,

this condition in the citrus sections of the state.

#### Truck Replaces Teams

In the cranberry marshes of New Jersey, the motor truck is doing good duty. One of the prominent growers of that state said that his truck would pull through the slippery bogs with comparative ease. Upon arriving on the main trail the truck had to pass through a long stretch of sand underlaid by quick sand, all of which is covered with four feet of water from the middle of October until the last of May each year. But through this slippery soil the motor truck makes 20 to 25 complete 4½-mile trips daily during the picking season. The truck has replaced five teams and surpassed the record of the teams by approximately 100 per cent.

Harry Chant, a New Jersey apple grower, regularly receives 15 to 35 per cent more for his fruit since he began transporting them to market on a motor truck than is obtained by neighboring growers who haul on wagons. Other New Jersey fruit growers who have obtained highly gratifying profits through the use of motor trucks are Jacob Raff and his son Wilmer. During the past season it would have been extremely difficult for them to have marketed their crop of 35,000 baskets without motor truck service.

Judge W. H. Felton cites the herculean task accomplished by two trucks of 1½ and 2 tons respectively on his orchard containing 56,000 trees near Marshallville, Ga. These trucks did all of the hauling connected with a crop of 100 car loads of peaches, and in addition served for the transportation of the grain, cotton and other products grown on the remainder of the 1,100 acres comprising the farm. By the use of the motor trucks Judge Felton increased his hauling one-third with the same number of hands. One truck and two men hauled as much fertilizer as five teams and five men would have done, and with much more satisfaction.

In the Gertrude Cochrane orchards in California a \$25,000 crop of prunes was rescued with motor trucks. A heavy rain at ripening time means disaster to a prune crop. Last year a heavy rain of several days' duration occurred in the locality of this orchard just as the prunes began to fall. Without their motor trucks it would have been impossible to have gathered this crop and got it out of the orchard in time to save it from serious loss.

These are but a few of the hun-

dreds of instances that could be mentioned of the service that is being obtained by fruit growers from other trucks. With the improvements that are being made in these vehicles every year, and the increasing number of fruit growers who are buying trucks, the motorization of the fruit farm is making great progress. The future is certain to show even greater progress than has been made thus far, as new and newer improvements are evolved.

fruit is 99,860. It may be safely asserted that the net proceeds per box to the owner was \$2, making around \$200,000. The owner states that but two years out of the 15 did a deficit occur, while 13 years showed a handsome profit. The trees set in this grove came from the famous Bishop-Hoyt company grove at Citra and are of the "pineapple" variety.

While our grove properties do not border the highways and railroads of our county as they did in the years that are gone, there are many handsome and paying orange groves away from general public view, producing a quality of orange which cannot be surpassed by any other section of the world.

The winter temperature, subsequent to the freeze of 1895, has not, on an average, been any lower than it was prior thereto; and one may invest in or start an orange grove in this county with as much assurance of success at the present time as at any period during the history of the business.

Marion county possesses many available acres of rich hammock and pine lands, suitable for orange culture, and it is only surprising that people coming to the state for the purpose of growing oranges pass by these fine lands and locations in Marion county to start their groves on poorer land in other sections of the state.

When the freeze came, many in the orange business were left without means to carry on. Some, in a small way, attempted to rehabilitate their destroyed property. Others abandoned them entirely and engaged in other pursuits. The rich lands of Marion county offered such splendid opportunities for truck growing, stock raising, general farming, phosphate mining, lumber and naval stores, that many changes and diversions in business took place, and citrus growing was more or less neglected. But a few of the former orange growers held onto their property with a determination to bring the trees back to a profitable state or condition. Those who made this attempt have no reason to regret it, and the result of their efforts may be plainly seen.

#### What One Man Did

Does orange growing in Marion county pay? The following is the result from one grove—the Kendig, or "Wissahickon," a 50-acre tract located five miles south of the margin of Orange lake. Mr. John Kendig, of Philadelphia, came into possession of this property in 1888—three years after the cold of 1885. It was soon brought into bearing and has yielded a crop of fruit every year since. The aggregate number of boxes gathered from this grove since it began to bear is

#### YOUNG GROVE SOLD

County Tax Collector Cyril Baldwin has sold his 35-acre grove at Avon Park to Steve Roberts of Zoilo for a consideration of \$20,000. This property consists of 1,800 four-year-old budded trees, of early and late varieties of oranges, and was put out by Mr. Baldwin. It is on the shore of Lake Glenada, two miles south of Avon Park. The grove bloomed for the first time this year. The land is well fenced and there is a dwelling house on it. Situate on the lake, as it is, it is well drained.

#### ANOTHER WALLIS FOR NOCATEE FRUIT COMPANY

In the big citrus groves and truck gardens of the Nocatee Fruit company has appeared another of the mammoth Wallis tractors which will be used in expediting the work of caring for the crops. These people keep the best looking groves in the country and it is with the aid of modern machinery that such progress is maintained.

They are raising watermelons in large quantities, as well as cabbage, cucumbers, besides many hundred acres in the finest citrus fruit trees to be found anywhere.

## THE CITRUS INDUSTRY

Horticultural Society Meeting CALIFORNIA NEWS OF INTEREST  
(Continued from Page 7) TO CITRUS GROWERS

"Spraying and Dusting of Citrus Fruits"—W. W. Yothers, Orlando; J. R. Winston, Orlando; T. A. Brown, Fort Myers; A. C. Terwilliger, Titusville.

Address (a), "Sulphur Sprays for Rust Mites"; (b) "Dry Sulphur Forms vs. Liquid Sulphur Solution," W. W. Yothers, U. S. Department of Agriculture, Orlando.

Address, "Tear Staining of Citrus Fruits," J. R. Winston, U. S. Department of Agriculture, Orlando.

Conference on "The Marketing of Grapefruit"—Dr. J. H. Ross, Winter Haven; J. C. Chase, Jacksonville; F. L. Skelley, Orlando.

"Grove Management"—A. M. Thiden, Winter Haven; H. L. Borland, Citra; J. H. Sadler, Oakland.

Address, "Honey Bees and Orange Trees," Frank Stirling, Gainesville.

Address, "The Growing of Satsuma Oranges," O. F. E. Winberg, Silver Hill, Ala.

Address, "Fumigation in Quarantine Work at Ports," Dr. J. H. Montgomery, Gainesville.

Address, "The Advantages of the Florida System of Nursery Inspection," F. M. O'Byrne, Gainesville.

Entertainment by the People of Ocala and Marion County.

"Ornamentals"—C. D. Mills, Jacksonville; Mrs. W. T. Gary, Ocala; W. A. Cook, Oneco; J. M. Pemble, Leesburg.

Address, "The Home and the Garden," W. A. Cook, Oneco.

Address, "The Growing of Asparagus Plumosa," J. M. Pemble, Leesburg.

## Friday, May 7

"Home Fruit Gardens"—Charles S. Emerson, Jacksonville; Miss Harriet B. Layton, Tallahassee.

"Deciduous Fruits"—H. G. Clayton, Gainesville; H. H. Simmons, Jacksonville; F. L. Zimmerman, Oldsmar.

Address, "Plums in Florida," H. H. Simmons, Jacksonville.

Address, "The Growing of Grapes in Florida," F. J. Zimmerman, Oldsmar.

Address, "Pecans," C. A. Reed, U. S. Department of Agriculture, Washington, D. C.

## Lakeland Packing House Changes Hands

Messrs. E. W. Wiggins, G. W. Foster and R. J. Head, prominent Plant City fruit and vegetable buyers, closed a deal recently whereby they acquired a valuable packing house site in Lakeland. The property is located just east of the electric light plant and the sum involved was said to be large.

About 50 boxes of oranges were taken from the orchard of Thomas Johnson at Ontario recently by erect a new club house.

A card from A. D. Shamel announces that his work is going nicely in Hawaii, and that he expects to return to California the latter part of May.

Experiments are being made in the Santa Clara valley in spraying thrips by E. O. Essig and Donald Currier. Dusts and oil sprays are being tested as to comparative efficiency.

An orange weighing 42 ounces has been produced on the Roberts ranch in the El Cajon valley and has been exhibited at the chamber of commerce rooms. The shape and the color were both good.

E. J. Borchard of the Oxnard Citrus association and S. E. Skidmore of the Old Baldy Citrus association of Upland have recently joined the Lemon Men's club.

The question of what June and later dry months may bring forth in the way of a drop is all that is preventing a prognostication of a heavy crop for next year. The present indications are favorable for much fruit.

L. M. Banks and C. O. Banks, who have conducted a citrus fruit brokerage business at Monrovia for 14 years, have dissolved partnership. Leroy M. Banks has opened up offices at Santa Ana for the handling largely of Valencia, while Chester O. Banks will continue the business at Monrovia.

The product of the 800-acre lemon planting of the Mills Orchard Corporation of Hamilton City this season was excellent as to quantity and quality. The fruit was handled through the corporation's fine new packing house.

Orange county sales of orange and walnut land in the past three months have aggregated \$1,845,000, real estate men say.

Mrs. E. H. Schwinger, a San Fernando club woman, has devised a method of preparing oranges, pulp, peel and blossom in such a way as to attain a most attractive and appetizing result. She candies the peel in half sections, then refills the shell

with the former contents made into marmalade and on top places a candied blossom. By the sale of this dainty Mrs. Schwinger proposes to aid in the campaign for funds to erect a new club house.

The committee of members of the Anaheim board of trade, which has considered the matter of a Valencia show there, has decided that it is too late to undertake it for this year. The sentiment appeared to be that such a plan might be adopted next year, however.

The belief is expressed in some sections that the early bloom of oranges will tend to lessen the June drop this year, on the ground that the fruit will be larger and more firmly set at the time of the heat and low moisture. The more conservative growers are not saying anything, but are waiting to see what actually happens.

Secretary B. A. Crawford of the Tustin Hills Citrus association recently reported to the stockholders that 176,589 packed boxes or 445½ cars of fruit were shipped last year by that organization, as against 218 the year previously. Owing to the fine rains an excellent crop is anticipated this year.

Owing to water shortage, ranchers in the north are being asked to irrigate at night and Sundays in order to take the "load" off the power uses of the day time.

The Lemon Growers' association of Upland have taken out a building permit for a new packing house to cost \$125,000. The house is being built of concrete and hollow tile.

The state department of agriculture reports that one Orange county nursery company has pleaded guilty to selling nursery stock untrue to name and that it was penalized on two counts for \$200 or 200 days in jail.

The new packing house of the Muju Citrus association at Santa Paula is completed and in operation. It is most attractive in appearance, is built of hollow tile and the facade is of ornamental pressed brick. The dimensions of main floor and basement are 100 by 80 feet, giving a total floor area of 16,000 square feet. The Payker machine works provided the grading and other machinery. The house is provided with 92 windows in the skylight. Commodious rest rooms are provided for employees. The manager's office and directors

rooms are on the second floor of the building. The house is one of which the association may well feel proud.

A. M. Pratt, sales manager for the Mutual Orange Distributors, attended the sales agency annual meeting in Chicago last month.

Two shipments marked "plants" have been found by horticultural inspectors of Imperial county to contain in one case cake and jelly and in the other two bottles of whisky. That apparently is a poor way to camouflage shipments.

One packing house in Orange county shipped Valencias early in March, but most house managers did not pack any of that variety as early, feeling that the fruit was not sufficiently ripe to command a friendly reception for it in the market.

A quarantine will become effective June 1 against fruit stocks, cuttings, scions and buds from Asia, Japan, Philippine Islands and Oceania, for the purpose of excluding from the United States such pests as canker, blister blights, rusts, oriental fruit moth, pear fruit borer and apple moth. It is declared that the quarantine has little commercial significance, as importations are limited, but recently applications have come for permits to import from Japan.

The Upland News in a recent issue asserts that between 1,000 and 1,500 are daily engaged in the O. K. exchange district in harvesting citrus fruits and that 18 cars daily are leaving the packing houses.

Director G. H. Hecke of the state department of agriculture and Supt. H. S. Smith of the pest control division addressed the directors of the exchange Wednesday, April 14. They spoke of the work and needs of their department in protecting the agricultural interests of California.

The Southern Pacific company has appointed C. J. McDonald of San Francisco as general agent in charge of refrigeration service over its system. The annual output from California of perishable foods has grown to such volume that it became necessary to delegate one officer to give this subject undivided attention. Mr. McDonald was connected with the railroad administration during government ownership period.

The Tustin Lemon association at its annual meeting elected the following officers: President, F. B.

Dr. S. W. Miller has sold a 21-acre orange grove near the Orange county hospital to Philip Laux.

A new lemon packing house has been completed in Maxwell, Colusa county, to handle fruit in the Sacramento valley.

Browning; vice-president, W. D. Flippin; secretary and manager, Roy Runnels; treasurer, J. Howard Turner; directors, Perry Lewis, J. P. Hight and C. D. Holmes. The report of manager Runnels showed that 52,669 packed boxes of lemons were shipped last year, for which the growers were paid \$139,368.43. Recently growers having 200 acres of lemons joined this association.

W. M. Mertz, manager of the Frostless Foothill Fruit company at Alta Loma, has agreed to take charge of the citrus fruit section of the work of the San Bernardino farm bureau. Prof. Weldon will now devote his time to the deciduous fruit section.

For a consideration reported to have been approximately \$450,000, the famous La Puente del Sol orange grove at Pasadena has been sold by A. Stephen Vavra to G. Rupert Johnson of Pasadena. This property is located on the Arroyo Seco and commands a wonderful view of the mountains. It comprises 51 acres of oranges, 41 of which are in bearing. The property includes a private park and a preserve stocked with quail, pheasants and other birds. This grove is said to be the largest in Pasadena and is one of the show places of California.

#### TO PREVENT RED SCALE

In order to carry on intensive work to prevent red scale from becoming established in Ventura county, Calif-

fornia, the county horticultural officials have called on the growers to aid in a financial way to raise a fund by which they may pay inspectors more than \$3.50 a day. The state law permits only that amount for inspectors and suitable men cannot be had for that sum. Up to this time little trouble has been experienced with the red scale in that district and a strenuous effort is being made to keep it out.

#### TEMPLE TOWN DEVELOPMENT

##### EAST OF LAKE WALES

We are advised by J. F. Towneend, general contractor, of Lake Wales, that he has been engaged by the Temple Groves corporation to erect buildings on their property five miles east of Lake Wales on the S. A. L. to cost about \$25,000.

This development comprises one thousand acres of land that is to be set to Temple oranges and is owned by M. E. Gillett & Son of Tampa and Lucerne Park, and Mr. August Hecksher of New York and Lake Wales, and M. G. Campbell, formerly with the E. O. Painter Fertilizer company, will be resident manager. The work of clearing land and the erection of buildings on this property has already commenced.

#### DEEP LAKE FRUIT

##### NOW BEING MOVED

The fine crop of Deep Lake fruit, from the large grove of the Deep Lake company, consisting of grapefruit of the seedless variety, is now being moved. The first cargo of this fruit arrived in Fort Myers and is being packed by the Standard Growers' Exchange for shipment. This first shipment amounted to about 1,000 boxes.

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## THE CITRUS INDUSTRY

## CLASSIFIED ADVERTISEMENTS

The rate for advertisements of this nature is only three cents per word for each insertion. You may count the number of words you have, multiply by three, and you will have the cost of the advertisement for one insertion. Multiply this by the total number of insertions desired and you will have the total cost. This rate is so low that we cannot charge classified accounts, and would, therefore, appreciate a remittance with order. No advertisement accepted for less than 50 cents.

THE CITRUS INDUSTRY  
411 Curry Bldg., Tampa, Florida

## REAL ESTATE

GOOD FARM FOR SALE—112 acres, two miles from railroad town, schools, churches, etc. Six miles county seat. Improved. \$14,000. Full description on request. Ernest Cook, Cecilia, Ky.

FOR SALE—30 acres in Palm Beach County. Junction two hard roads, on bank of St. Lucie river; 18 acres under cultivation; 150 bearing grapefruit trees; good 5-room house, water in kitchen. Six miles from Stuart, 3½ miles Salerno. Address H. M. Gann, Lake Wales, Fla. M-3t

VIRGINIA ORCHARDS AND FARMS in very best fruit and farming sections. Prices very reasonable. Healthful climate and beautiful country. State wants and get descriptions. Wilder & Co., Charlottesville, Va.

OWNER of one of Willamette Valley, Oregon, finest 160-acre apple orchards for sale cheap. Reasonable terms. Suitable for subdivision. A. C. Bohrnstedt, 401 Masonic Temple, Salem, Oregon.

FOR SALE—17 acres with about 1,200 large bearing orange trees on them, a packing house, a two-story concrete building 28x37 feet, a full outfit of tools for running a grove all for \$25,000. Or will include 65 acres in all, if desired, for \$30,000. Property fronts on Indian River north for 1,100 feet, with the Dixie Highway, another fine shelled street and the Florida East Coast Ry. running through it. Especially desirable site for a wealthy person's winter home or as an orange grove proposition. Am crippled by an accident and must sell. W. S. Hart, Hawks Park, Fla.

205 ACRES—Orchard and stock farm. 4,000 bearing apple trees, 99 acres in orchard, 45 in other crops, balance in timber. Good buildings and water. Long terms. Low interest. W. H. Funk, Dixon, Mo.

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